

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A stent graft comprising an endoluminal stent and a graft, wherein the stent graft comprises silk.
2. (Original) The stent graft of claim 1 wherein the silk induces fibrosis between the stent graft and animal tissue.
3. (Original) The stent graft of claim 1 further comprising a biologically active agent, wherein the agent induces an enhanced fibrotic response in a host into which the stent graft has been inserted.
4. (Original) The stent graft of claim 1 wherein the silk is natural or recombinant silkworm silk or a derivative thereof.
5. (Original) The stent graft of claim 1 wherein the silk comprises fibroin.
6. (Original) The stent graft of claim 1 wherein the silk comprises sericin.
7. (Original) The stent graft of claim 1 wherein the silk is recombinant silk.
8. (Original) The stent graft of claim 1 wherein the silk is natural or recombinant spider silk or a derivative thereof.
9. (Original) The stent graft of claim 1 wherein the silk is in the form of a thread.

10. (Original) The stent graft of claim 1 wherein the silk is in the form of a braid.
11. (Original) The stent graft of claim 1 wherein the silk is in the form of a sheet.
12. (Original) The stent graft of claim 1 wherein the silk is in the form of powder.
13. (Original) The stent graft of claim 1 wherein the silk is acylated silk.
14. (Original) The stent graft of claim 1 wherein the silk is attached to the stent graft by interweaving the silk into the graft.
15. (Original) The stent graft of claim 1 wherein the silk is attached to the stent graft by means of an adhesive.
16. (Original) The stent graft of claim 1 wherein the silk is attached to the stent graft by means of suture.
17. (Original) The stent graft of claim 1 wherein the silk is attached only to the outside of the stent graft.
18. (Original) The stent graft of claim 1 wherein the silk is attached to distal regions of the stent graft.
19. (Original) The stent graft of claim 1 wherein a plurality of separated silk braids is attached to the stent graft.

20. (Original) The stent graft of claim 1 wherein the silk is attached to the stent portion of the stent graft.

21. (Original) The stent graft of claim 1 wherein the silk is attached to the graft portion of the stent graft.

22. (Original) The stent graft of claim 1 wherein the silk is present on the graft in an amount effective to induce a biological response in a host into which the stent graft has been inserted, where the biological response is a cellular matrix deposition between the stent graft and tissue adjacent to the stent graft.

23. (Original) The stent graft of claim 1 wherein the silk is present on the graft in an amount effective to induce a biological response in a host into which the stent graft has been inserted, where the biological response is an extracellular matrix deposition between the stent graft and tissue adjacent to the stent graft.

24. (Original) The stent graft of claim 1 further comprising a coating on some or all of the silk, where the coating degrades upon insertion of the stent graft into a host, the coating thereby delaying contact between the silk and the host.

25. (Original) The stent graft of claim 24 wherein the coating comprises a compound selected from the group consisting of gelatin, degradable polyesters, cellulose and cellulose derivatives, polysaccharides, lipids, fatty acids, sugar esters, nucleic acid esters, polyanhydrides, polyorthoesters and polyvinylalcohol.

26. (Original) The stent graft of claim 25 wherein the degradable polyester is selected from the group consisting of PLGA, PLA, MePEG-PLGA, PLGA-PEG-PLGA, and copolymers and blends thereof.

27. (Original) The stent graft of claim 25 wherein the cellulose derivative is hydroxypropyl cellulose.

28. (Original) The stent graft of claim 25 wherein the polysaccharide is selected from the group consisting of hyaluronic acid, dextran, dextran sulfate, and chitosan.

29. (Original) The stent graft of claim 1 wherein the silk induces fibrosis between the stent graft and animal tissue.

30. (Original) The stent graft of claim 1 wherein the silk induces adhesion between the stent graft and animal tissue.

31-69. (Canceled)

70. (Original) The stent graft of claim 1 wherein the stent graft is bifurcated.

71. (Original) The stent graft of claim 1 wherein the stent graft is a tube graft.

72. (Original) The stent graft of claim 1 wherein the stent graft is cylindrical.

73. (Original) The stent graft of claim 1 wherein the stent graft is self-expandable.

74. (Original) The stent graft of claim 1 wherein the stent graft is balloon-expandable.

75. (Original) The stent graft of claim 1 comprising distal ends, wherein the distal ends are adapted to release an agent that induces fibrosis.

76. (Original) The stent graft of claim 1 wherein the entire body of the stent graft is adapted to release an agent that induces fibrosis.

77. (Original) The stent graft of claim 1 wherein the stent graft is sterile.

78. (Original) The stent graft of claim 1 wherein the stent graft comprises an endoluminal stent and a graft, wherein the graft comprises an expandable portion that enhances the stiffness of the stent graft upon expansion.

79-99. (Canceled)

100. (Original) The stent graft of claim 2 further comprising a coating on some or all of the silk, where the coating degrades upon insertion of the stent graft into a host, the coating thereby delaying contact between the silk and the host.

101. (Original) The stent graft of claim 100 wherein the coating comprises a compound selected from the group consisting of gelatin, degradable polyesters, cellulose and cellulose derivatives, polysaccharides, lipids, fatty acids, sugar esters, nucleic acid esters, polyanhydrides, polyorthoesters and polyvinylalcohol.

102. (Original) The stent graft of claim 101 wherein the degradable polyester is selected from the group consisting of PLGA, PLA, MePEG-PLGA, PLGA-PEG-PLGA, and copolymers and blends thereof.

103. (Original) The stent graft of claim 100 wherein the cellulose derivative is hydroxypropyl cellulose.

104. (Original) The stent graft of claim 100 wherein the polysaccharide is selected from the group consisting of hyaluronic acid, dextran, dextran sulfate, and chitosan.

105. (Original) The stent graft of claim 2 wherein the silk induces adhesion between the stent graft and animal tissue.

106. (Original) The stent graft of claim 2 further comprising a biologically active agent, where the agent induces an enhanced fibrotic response in a host into which the stent graft has been inserted.

107. (Original) The stent graft of claim 106 wherein the agent is bleomycin or an analogue or derivative thereof.

108. (Original) The stent graft of claim 106 wherein the agent is selected from the group consisting of talcum powder, talc, ethanol, metallic beryllium and oxides thereof, silver nitrate, copper, silk, silica, crystalline silicates, and quartz dust.

109. (Original) The stent graft of claim 106 wherein the agent is selected from the group consisting of poly(ethylene-co-vinylacetate), polyurethane, and polymers and copolymers of acrylic acid.

110. (Original) The stent graft of claim 106 wherein the agent is vinyl chloride or a polymer of vinyl chloride.

111. (Original) The stent graft of claim 106 wherein the agent is is an adhesive selected from the group consisting of cyanoacrylate, crosslinked poly(ethylene glycol) – methylated collagen, and derivatives thereof.

112. (Original) The stent graft of claim 106 wherein the agent is selected from the group consisting of proteins, carbohydrates and peptides that contain cellular adhesion sequences.

113. (Original) The stent graft of claim 106 wherein the agent is an inflammatory cytokine.

114. (Original) The stent graft of claim 113 wherein the inflammatory cytokine is selected from the group consisting of TGF β , PDGF, VEGF, aFGF, bFGF, TNF α , NGF, GM-CSF, IGF-a, IL-1, IL-8, IL-6, growth hormone, EDGF, CTGF, and peptide and non-peptide agonists, analogues and derivatives thereof.

115. (Original) The stent graft claim 106 wherein the agent is a component of extracellular matrix.

116. (Original) The stent graft of claim 115 wherein the component is vitronectin, fibronectin, chondroitin sulphate, laminin, hyaluronic acid, elastin, fibrin, fibrinogen, bitronectin, proteins found in basement membrane, fibrosin, or collagen.

117. (Original) The stent graft of claim 106 wherein the agent is selected from the group consisting of polylysine, chitosan, and N-carboxybutylchitosan.

118. (Original) The stent graft of claim 106 wherein the agent is a factor produced by immune cells.

119. (Original) The stent graft of claim 118 wherein the factor is selected from the group consisting of Interleukin-2 (IL-2), Interleukin-4 (IL-4), Interleukin-1 (IL-1), Interleukin-8 (IL-8), Interleukin-6 (IL-6) and peptide and non-peptide agonists, analogues and derivatives thereof.

120. (Original) The stent graft of claim 118 wherein the factor is selected from the group consisting of Granulocyte-Monocyte Colony-Stimulating-Factor (GM-CSM), monocyte chemotactic protein, histamine, and cell adhesion molecules.

121. (Original) The stent graft of claim 106 wherein the agent is selected from the group consisting of naturally occurring and synthetic peptides containing the RGD residue sequence.

122. (Original) The stent graft of claim 106 wherein the agent is a bone morphogenic protein (BMP).

123. (Original) The stent graft of claim 122 wherein the BMP is BMP-2, BMP-3, BMP-4, BMP-5, BMP-6, or BMP-7.

124. (Original) The stent graft of claim 106 wherein the agent is selected from the group consisting of inorganic and organic small anionic molecule stimulants.

125. (Original) The stent graft of claim 106 wherein the agent is wherein the agent is selected from the group consisting of DNA and RNA sequences which are capable of promoting synthesis of proteins that stimulate cell growth.

126. (Original) The stent graft of claim 2 further comprising a proliferative agent that stimulates cellular proliferation.

127. (Original) The stent graft of claim 126 wherein the proliferative agent is selected from the group consisting of dexamethasone, isotretinoin, 17- β -estradiol, diethylstilbesterol, cyclosporin A, all-trans retinoic acid (ATRA), and analogues and derivatives thereof.

128. (Original) The stent graft of claim 2 further comprising a biologically active agent that inhibits or prevents expansion of an aneurysm.

129. (Original) The stent graft of claim 128 wherein the agent is a caspase inhibitor.

130. (Original) The stent graft of claim 129 wherein the caspase inhibitor is VX-799.
131. (Original) The stent graft of claim 128 wherein the agent is an MMP inhibitor.
132. (Original) The stent graft of claim 131 wherein the MMP inhibitor is BATIMASTAT or MARIMISTAT.
133. (Original) The stent graft of claim 128 wherein the agent is a tissue inhibitor of matrix metalloproteinases (TIMP).
134. (Original) The stent graft of claim 128 wherein the agent is a cytokine inhibitor.
135. (Original) The stent graft of claim 134 wherein the cytokine inhibitor is chlorpromazine, mycophenolic acid, rapamycin, or 1α -hydroxy vitamin D₃.
136. (Original) The stent graft of claim 128 wherein the agent is a MCP-1 antagonist.
137. (Original) The stent graft of claim 136 wherein the MCP-1 antagonist is nitronaproxen, Bindarit, or 1-alpha-25 dihydroxy vitamin D₃.
138. (Original) The stent graft of claim 128 wherein the agent is a TNFa antagonist or a TACE inhibitor.
139. (Original) The stent graft of claim 138 wherein the TACE inhibitor is E-5531, AZD-4717, glycoposphopeptical, UR-12715, cilomilast, infliximab, lentinan, or etanercept.

140. (Original) The stent graft of claim 128 wherein the agent is selected from the group consisting of IL-1, ICE, and IRAK antagonists.

141. (Original) The stent graft of claim 140 wherein the agent is E-5090, CH-172, CH-490, AMG-719, iguratimod, AV94-88, pralnacasan, ESONARIMOD, or tranexamic acid.

142. (Original) The stent graft of claim 128 wherein the agent is a chemokine receptor antagonist.

143. (Original) The stent graft of claim 142 wherein the chemokine receptor antagonist is ONO-4128, L-381, CT-112, AS-900004, SCH-C, ZK-811752, PD-172084, UK-427857, SB-380732, vMIP II, SB-265610, DPC-168, TAK-779, TAK-220, or KRH-1120.

144. (Original) The stent graft of claim 128 wherein the agent is an anti-inflammatory agent.

145. (Original) The stent graft of claim 144 wherein the anti-inflammatory agent is selected from the group consisting of dexamethasone, cortisone, fludrocortisone, prednisone, prednisolone, 6 α -methylprednisolone, triamcinolone, betamethasone, and analogues and derivatives thereof.

146 – 425. (Canceled)

426. (Currently amended) A method for treating a patient having an aneurysm, comprising delivering to a patient a stent graft of ~~any one of claims 1 to 286~~ claim 1.

427. (Original) The method of claim 426 wherein the aneurysm is an abdominal aortic aneurysm.

428. (Original) The method of claim 426 wherein the aneurysm is a thoracic aortic aneurysm.

429. (Original) The method of claim 426 wherein the aneurysm is an iliac aortic aneurysm.

430. (Original) The method of claim 426 wherein the stent graft is delivered into a patient in a constrained form, and self-expands into place after release of a constraining device.

431. (Original) The method of claim 426 wherein the stent graft is delivered to the patient by balloon catheter.

432. (Currently amended) A method for bypassing disease within a vessel, comprising delivering to a patient in need thereof a stent graft of ~~any one of claims 1 to 286~~ claim 1, such that vessel contents bypass the diseased portion of the vessel.

433. (Original) The method of claim 432 wherein the stent graft is delivered into a patient in a constrained form, and self-expands into place after release of a constraining device.

434. (Original) The method of claim 432 wherein the stent graft is delivered to the patient by balloon catheter.

435. (Currently amended) A method for creating communication between an artery and a vein, comprising delivering to a patient in need thereof a stent graft of ~~any one of claims 1 to 286~~ claim 1, such that a passageway is created between the artery and vein.

436. (Original) The method of claim 435 wherein the stent graft is delivered into a patient in a constrained form, and self-expands into place after release of a constraining device.

437. (Original) The method of claim 435 wherein the stent graft is delivered to the patient by balloon catheter.

438. (Currently amended) A method for creating communication between a first vein and a second vein, comprising delivering to a patient in need thereof a stent graft of ~~any one of claims 1 to 286~~ claim 1, such that a passageway is created between the first and second veins.

439. (Original) The method of claim 438 wherein the stent graft is delivered into a patient in a constrained form, and self-expands into place after release of a constraining device.

440. (Original) The method of claim 438 wherein the stent graft is delivered to the patient by balloon catheter.

441. (Currently amended) A method for reducing perigraft leakage associated with stent graft delivery in a patient, comprising delivering a stent graft of ~~any one of claims 1 to 286~~ claim 1 to the patient.

442. (Original) The method of claim 441 wherein the stent graft is delivered into a patient in a constrained form, and self-expands into place after release of a constraining device.

443. (Original) The method of claim 441 wherein the stent graft is delivered to the patient by balloon catheter.

444. (Currently amended) A method of adhering a stent graft in a patient in need thereof comprising inserting a stent graft of ~~any one of claims 1 to 286~~ claim 1 into the patient.